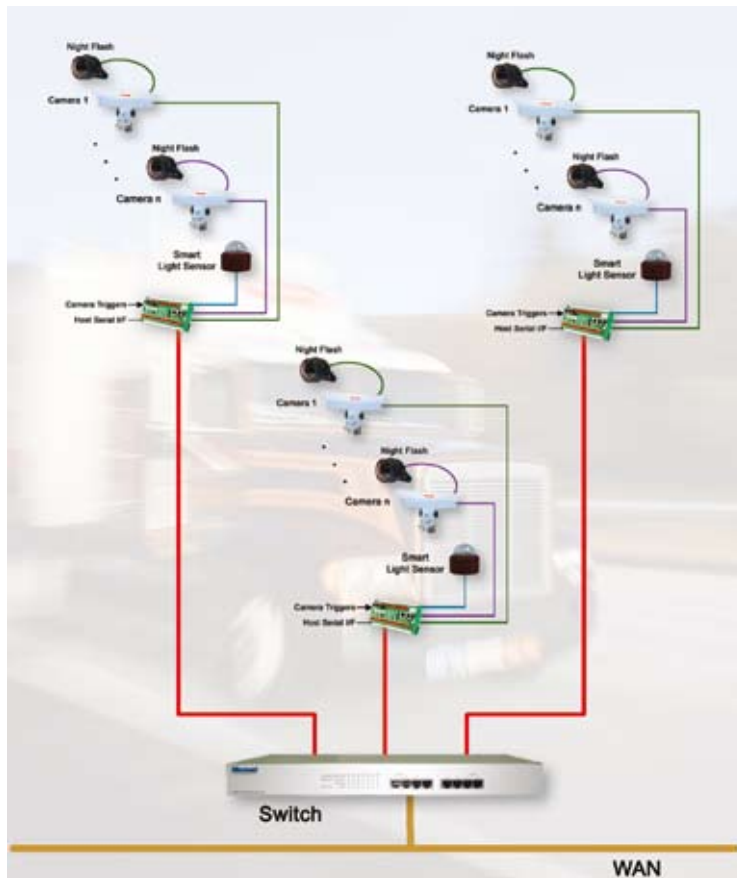


➤ **Vis-300/400**  
Ethernet System



- Produces high-quality images of vehicles and license plates, 24 hours a day, in all ambient lighting conditions.
- Generates high-resolution progressive scan (768 x 484) B&W or color images. The next-generation HDTV (2kx1k) version will be available in 2006.
- Sends data to a designated IP address or to an FPT site.
- Outputs files in either TIFF or JPEG format.
- Produces sharp images at vehicle speeds up to 350Km/hr (217mph).
- 30 images/second or asynchronously triggered image capture.
- Images the entire vehicle, NOT just retro-reflective plates, at night—a must for most law-enforcement applications.

# VIS-300/400

## Components

The JAI VIS includes the following components, customized according to each application's needs:

- TS-9720EN, TSC-9720EN (color version), TS-2030 (available 2006) 2000 x 1000 HDTV format, traffic camera(s)
- VIS300 Electronic Junction Panel
- TLS-300 Traffic Light Sensor
- Lighting options: TNF-21, TNF-31, TNC-1000
- Laser vehicle detector trigger option

## General Description

The next-generation JAI Vehicle Imaging System (VIS) is a high-performance imaging solution for advanced ITS imaging applications, including automated license plate reading systems and vehicle fingerprinting recognition applications. The VIS is field-proven to produce high-contrast images of passing vehicles and their license plates under all weather and lighting conditions. Retro-reflective and non-retro-reflective license plates, even older plates, are easily captured by the VIS in combination with JAI illumination solutions, 24/7.

The JAI VIS is suitable for multi-lane use in either lane-based or high-speed open-road applications. The VIS captures full-frame images on demand from a variety of vehicle detection triggers. It can also be set to generate 30 full-frame (768 pixels by 484 lines, or future release 2k x 1k) images per second. This quality resolution (progressive scan) is critical to ensure plate legibility.

JAI can provide a variety of VIS nighttime lighting options to help your system generate high-quality images at night. These options include continuous lighting (TNC-1000), as well as nighttime flash lighting (TNF-21 or TNF-31) that can accommodate the ever-widening range of plate color combinations. We can even handle those situations in which near-infrared lighting cannot produce legible plate images. All available VIS lighting options meet road safety standards.

Unlike other imaging systems, the JAI VIS Subsystem adapts instantly to changing lighting conditions, even when there is no vehicle in the camera's field of view. This intelligence is made possible by a JAI patent-pending Traffic Light Sensor that continuously measures the instantaneous dynamic range of plate/vehicle brightness and electronically adapts camera parameters (such as gain and shutter speed) to achieve optimal imaging. Because the camera uses no mechanically moving parts (i.e. auto-iris lens) are used, it is much less likely to fail. Please refer to our separate specification sheets for further details of the VIS components.

The light sensor and VIS cameras communicate over a local VIS network utilizing Ethernet communications. VIS subsystems can report the health and status of all components to any IP address on the network.

## Smart Light Sensor (TLS-300)

The patent-pending JAI light sensor is the driver of the VIS Network. It continuously monitors the ambient lighting conditions, then computes shutter, gain, and pedestal settings for the cameras on the network to ensure high-contrast images. These commands are then broadcast over the VIS Ethernet network every 1/10 second to keep the cameras up to date with even the most rapidly varying ambient lighting conditions. A single light sensor is commonly used to control up to twenty cameras for multi-lane applications.



## VIS Traffic Camera (TS-9720 and TS-2030)

The VIS traffic camera utilizes a state-of-the-art progressive interline transfer CCD that captures all of the vertical resolution at once with no field-to-field imaging delays. Progressive scanning allows the VIS camera to capture a rapidly moving vehicle at high resolution without the need for a mechanical shutter. VIS camera provides two resolution options for various lane widths and comes complete with zoom lens, antiglare filter, and interface circuitry in a heated weather-proof enclosure.



## VIS Junction Panel (VJP300)

The VIS Junction Panel makes site installation quick and easy. The Junction Panel is the interface between the JAI VIS Subsystem and the rest of your system. It is used with a DC output power supply (AC PSU) for the cameras and light sensor, and terminal blocks to simplify connecting trigger input, host interface and interconnecting cameras and light sensor.



## Nighttime Illuminator(s) (TNF-21, TNF-31, TNC-1000, LED-12)

Three lighting options are available for the VIS Subsystem. The TNF-21 or TNF-31 Traffic Night Flash is an 18W long life (up to 4 million flashes) dual-band flash unit. The flash filters light to wavelengths invisible to the human eye, which means it is well suited for both front and rear vehicle imaging. The TNC-100 is a 70 watt continuous white-light lamp and a focusing reflector enclosed in an outdoor fixture. It illuminates up to one-and-a-half lane widths with white light. The amplitude of the light can be set to achieve a wide range of illumination levels. A unique feature of this gas lamp is its ability to produce very bright light that is stable over very short exposure times, without brightness oscillations. In contrast, the brightness of most gas lamps oscillates at the AC frequency, which produces unsatisfactory pictures at the high shutter speeds needed to freeze fast-moving vehicles. Because the TNC-1000 is extremely bright, however, it is only suitable for rear imaging of vehicles.



TNF-21



TNF-31

The LED-12 illumination ring is a 6 watt ultra long-life (>100,000 hours) low-intensity white-light illuminator. It is incorporated into the camera housing and is suitable for front or rear vehicle imaging. The LED-12 is used in those situations where certain license plate color combinations are difficult to image with the flash alone.

JAI is the world leader in high-performance vehicle imaging technologies that target the specific needs and concerns of roadway operators and transit authority executives. JAI delivers advanced real-world proven lane hardware and software that delivers superior performance. We also offer products and services to reduce back-office enterprise processing costs. No other industry provider can compete with our breadth of uniquely tailored products such as high speed vehicle capture (0-200 MPH), license plate reading (LPR) combined with vehicle fingerprinting, delivering patented video billing products, and specific homeland security services.

Working together with our valued system integrator partners around the world, JAI has delivered more than 20,000 vehicle imaging cameras and systems devoted to the electronic tolling collection, speed enforcement, parking lot systems, and Homeland Security markets. JAI manufactures core imaging cameras and vehicle imaging products and services for worldwide traffic industry partners.

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